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EXAMINER

SHIN, KYUNG H

ART UNIT	PAPER NUMBER
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2143

DATE MAILED: 12/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/832,436

Applicant(s)

REYNOLDS, DANIEL A.

Examiner

Kyung H. Shin

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) 2, 19 and 28-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-18 and 20-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is responding to application RCE Filed 4/10/2001 and amended 9/12/2005.
2. Claims **1 - 27** are pending. Claims **2, 19, 28 - 39** have been canceled. Independent claims are **1, 11, 12, 18**.

Response to Arguments

3. Applicant's arguments with respect to claims 1, 3-18 and 20-27 have been considered but are moot in view of the new ground(s) of rejection.

Response to Remarks

- 3.1 Applicant argues that the referenced prior art does not disclose “... a plurality of distributed command proxies...” (see Remarks Page 10, Line 5)

The Rangachar (6,301,252) and Kekic (6,664,978) prior art combination discloses a distributed plurality of applications (i.e. software on client systems). (see Kekic col. 5, lines 9-15; col. 15, lines 32-36: distributed applications)

- 3.2 Applicant argues that the referenced prior art does not disclose “... teaching a distributed local interface ...” (see Remarks Page 10, Lines 28-29)

The Rangachar (6,301,252) and Kekic (6,664,978) prior art combination

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discloses a distributed architecture with a client/server communications configuration. In addition, a local user interface is provided for the input of commands. (see Kekic col. 5, lines 9-15; col. 15, lines 32-36: distributed architecture; col. 5, lines 40-42: local user interface)

3.3 Applicant argues that the referenced prior art does not disclose “ ... *registering a command ...* ” (see Remarks Page 12, Lines 4-5)

The Rangachar (6,301,252) and Kekic (6,664,978) prior art combination discloses registered commands or predefined commands existing in a list or a record. (see Kekic col. 16, lines 7-11: predefined commands (i.e. register, to place in a list))

Claim Rejections - 35 USC § 103

The text of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. **Claims 1, 3 - 5, 10 - 14, 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Rangachar et al.** (US 6,301,252) in view of **Kekic et al.** (US 6,664,978).

Regarding Claim 1, Rangachar discloses a method of managing a telecommunications network device, comprising:

d) forwarding the command to the application; (see Rangachar col. 5, lines 23-28):
send to process (command proxy) for applicable network device) and

- e) completing execution of the command. (see Rangachar col. 4, lines 41-47:
process command at network device)

Rangachar discloses a network management system controlling a plurality of managed network devices. (see Rangachar col. 4, lines 7-11: “ ... *a network manager (sometimes referred to as a network server or a network management station) communicating with a plurality of ... switches connected by communications links ...* ”) Rangachar does not specifically disclose the storage (register) of a command within a command interface.

However, Kekic discloses:

- a) registering at least one command executable by an application with one of a plurality of distributed command proxies associated with a command interface (see Kekic col. 5, lines 40-42: plurality of processes (i.e. daemons or executions) for distributed command interfaces), said command proxy being local to the application; (see Kekic col. 5, lines 9-15; col. 15, lines 32-36: distributed environment; col. 16, lines 7-11: predefined command (register (i.e. command stored in a list or record)))
- b) registering the command through the command proxy local to the application with a central command daemon associated with said command interface; (see Kekic col. 5, lines 9-15; col. 15, lines 32-36: distributed environment; col. 16, lines 7-11: predefined command (register (i.e. command stored in a list or record)))
- c) receiving the command at the command interface from a user interface; (see Kekic col. 5, lines 40-42: process command at local user interface)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rangachar to enable the capability to process commands via a local user interface as taught by Kekic. One of ordinary skill in the art would be motivated to employ Kekic in order to efficiently manage a changing, growing robust, and secure heterogeneous network. (see Kekic col. 5, lines 2-7: “ ... *efficiently manages a constantly changing and growing heterogeneous computer network ... solution of this invention ... is flexible, robust, secure, collaborative, and most importantly works ...* ”)

Regarding Claim 3, Rangachar discloses the method of claim 1, wherein receiving the command at the command interface from a user interface and forwarding the command to the application comprises:

- b) determining if the application that registered the received command is local to the command proxy that is local to the user interface; (see Rangachar col. 5, lines 23-28; col. 4, lines 41-47: command is sent to specific process (command proxy) for the particular network device from network manager (central command daemon))
- c) if yes, then forwarding the received command to the application that registered the received command; and if no, then forwarding the received command to the central command daemon. (see Rangachar col. 4, lines 28-30: forward commands to network manager for command implementation at local process, col. 5, lines 23-28: forward to network device for processing)

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Rangachar does not disclose a local user interface for the input of commands.

However, Kekic discloses:

- a) receiving the command at one of the plurality of command proxies that is local to the user interface; (see Kekic col. 5, lines 40-42: process command at local user interface)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rangachar to enable usage of local user interface to process commands as taught by Kekic. One of ordinary skill in the art would be motivated to employ Kekic in order to efficiently manage a changing, growing robust, and secure heterogeneous network. (see Kekic col. 5, lines 2-7)

Regarding Claim 4, Rangachar discloses the method of claim 3, further comprising:

- a) forwarding the received command to the one of the plurality of command proxies that registered the received command; (see Rangachar col. 5, lines 23-28: forward to process (command proxy)) and
- b) forwarding the received command to the application that registered the received command. (see Rangachar col. 4, lines 41-47: forward to network device for processing)

Regarding Claim 5, Rangachar does not specifically disclose the storage (register) of a command within a command interface. However, Kekic discloses the method of claim 1, wherein the command interface is a central system and wherein registering at least one command executable by an application with a command interface comprises:

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registering the command with a central command daemon. (see Kekic col. 5, lines 9-15; col. 15, lines 32-36: distributed environment; col. 16, lines 7-11: predefined command (register (i.e. command stored in a list or record))

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rangachar to enable usage of local user interface to process commands as taught by Kekic. One of ordinary skill in the art would be motivated to employ Kekic in order to efficiently manage a changing, growing robust, and secure heterogeneous network. (see Kekic col. 5, lines 2-7)

Regarding Claims 10, 17, Rangachar discloses the method of claims 1, 13, wherein the user interface comprises: a network/element management system interface. (see Rangachar col. 4, lines 7-11: network management system with management console or station)

Regarding Claim 11, Rangachar discloses a method of managing a telecommunications network device, comprising:

- c) receiving the command at a user interface; (see Rangachar col. 4, lines 28-30:
forward command to network manager (central command processing))
- d) forwarding the command to a second command proxy, wherein the second
command proxy is local to the user interface; (see Rangachar col. 5, lines 23-28:
forward command to applicable process (command proxy))

- e) forwarding the command through the second command proxy to the central command daemon; (see Rangachar col. 4, lines 28-30: forward command to network manager (central command processing))
- f) forwarding the command through the central command daemon to the first command proxy; (see Rangachar col. 5, lines 23-28: forward command to applicable process (command proxy))
- g) forwarding the command through the first command proxy to the application; (see Rangachar col. 4, lines 28-30: forward command to network manager (central command processing)) and
- h) completing execution of the command. (see Rangachar col. 4, lines 41-47: process command at network device)

Rangachar does not specifically disclose the storage (register) of a command within a command interface. However, Kekic discloses a method of managing a telecommunications network device, comprising:

- a) registering at least one command executable by an application with a first command proxy, wherein the first command proxy is local to the application; (see Kekic col. 5, lines 40-42: local user interface; col. 5, lines 9-15; col. 15, lines 32-36: distributed environment; col. 16, lines 7-11: predefined command (register (i.e. command stored in a list or record))
- b) registering the command through the first command proxy with a central command daemon; ((see Kekic col. 5, lines 9-15; col. 15, lines 32-36: distributed

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environment; col. 16, lines 7-11: predefined command (register (i.e. command stored in a list or record))

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rangachar to enable the capability to process commands via a local user interface as taught by Kekic. One of ordinary skill in the art would be motivated to employ Kekic in order to efficiently manage a changing, growing robust, and secure heterogeneous network. (see Kekic col. 5, lines 2-7)

Regarding Claim 12, Rangachar discloses a method of managing a telecommunications network including a first network device and a second network device, comprising:

- a) executing a community command daemon on one of the first or second network devices; (see Rangachar col. 4, lines 28-30: multiple network devices are managed by network manager (central command daemon))
- b) executing a first application on the first network device; executing a second application on the second network device; (see Rangachar col. 5, lines 23-28: applicable process (command proxy) is executed)

Rangachar does not specifically disclose the storage (register) of a command within a command interface. However, Kekic discloses a method of managing a telecommunications network including a first network device and a second network device, comprising:

- c) registering a first command executable by the first application with a first command interface on the first network device; registering a second command executable by the second application with a second command interface on the second network device; (see Kekic col. 5, lines 9-15; col. 15, lines 32-36: distributed environment; col. 16, lines 7-11: predefined command (register (i.e. command stored in a list or record)) and
- d) registering the first and second commands with the community command daemon. (see Kekic col. 5, lines 9-15; col. 15, lines 32-36: distributed environment; col. 16, lines 7-11: predefined command (register (i.e. command stored in a list or record))

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rangachar to enable the capability to process commands via a local user interface as taught by Kekic. One of ordinary skill in the art would be motivated to employ Kekic in order to efficiently manage a changing, growing robust, and secure heterogeneous network. (see Kekic col. 5, lines 2-7)

Regarding Claims 13, 14, Rangachar discloses the method of claim 12, further comprising:

- a) receiving the first/second command at the community command daemon from a user interface; (see Rangachar col. 6, lines 24-26: multiple command interface systems ;col. 4, lines 28-30: network manager (community command daemon))

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- b) forwarding the first command through the community command daemon to the first/second command interface; (see Rangachar col. 5, lines 14-19)
- c) forwarding the first/second command through the first command interface to the first/second application; (see Rangachar col. 5, lines 23-28) and
- d) completing execution of the first/second command. (see Rangachar col. 4, lines 41-47: process command at network device)

5. **Claims 6 - 8, 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Rangachar-Kekic** as applied to claims 1, 12 above, and further in view of **Barrett et al.** (US 6,782,420).

Regarding Claim 6, Rangachar does not specifically disclose an API interface for application development. However, Barrett discloses the method of claim 1, wherein completing execution of the command comprises:

receiving the command through a command application programming interface (API) linked into the application; and calling a call back routine within the application corresponding to the received command. (see Barrett col. 2, lines 41-46; col. 3, lines 16-20; col. 4, line 64 - col. 5, line 2: API interface exists for server network management system for application development)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rangachar to enable usage of an Application Programming Interface (API) in application development as taught by Barrett. One of ordinary skill in the art would be motivated to employ Barrett in order to enable efficient

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communications between a management server and distributed client. (see Barrett col. 3, lines 16-20)

Regarding Claim 7, Rangachar does not disclose a display interface for responses to command. However, Barrett discloses the method of claim 6, wherein completing execution of the command further comprises: calling a display routine linked into the application to send any display data directly to the user interface. (see Barrett col. 2, lines 38-41; col. 5, lines 56-60: display commands and responses at command console)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rangachar to enable a user interface for command processing as taught by Barrett. One of ordinary skill in the art would be motivated to employ Barrett in order to enable efficient communications between a management server and distributed client. (see Barrett col. 3, lines 16-20)

Regarding Claims 8, 15, Rangachar does not specifically disclose a web interface for the network management system. However, Barrett discloses the method of claims 1, 13, wherein the user interface comprises: a web interface. (see Barrett col. 3, lines 49-52; col. 4, lines 16-22: web type command interface for network management system)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rangachar to enable a web interface as taught by Barrett. One of ordinary skill in the art would be motivated to employ Barrett in order to enable efficient communications between a management server and distributed client.

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(see Barrett col. 3, lines 16-20)

6. **Claims 9, 16, 18, 20, 26, 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Rangachar-Kekic** as applied to claims 1, 12, 18 above, and further in view of **Chen et al.** (US 6,625,590).

Regarding Claims 9, 16, 26, Rangachar does not specifically disclose a command line interface. However, Chen discloses the method of claims 1, 13, 18, wherein the user interface comprises: a command language interface (CLI). (see Chen col. 1, lines 50-56: command line interface for command input)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rangachar to utilize a command line interface for usage by the network management system as taught by Chen. One of ordinary skill in the art would be motivated to enhance Rangachar in order to enable a flexible and robust user interface for network management control. (see Chen col. 1, lines 21-24: “ ... *provide more graphical and intuitive management of data communication networks, many network management platforms have adopted menu or icon-based interfaces* ... ”)

Regarding Claim 18, Rangachar discloses a telecommunications network device, comprising:

- a) an application capable of executing a command; (see Rangachar col. 5, lines 23-28: command processes (application) to execute a command)

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Rangachar does not specifically disclose the capability to register a command or a common command interface.

- b) However, Kekic discloses wherein comprising a distributed system and a plurality of distributed command proxies wherein the application is capable of registering the command and receiving the command from a user interface and forwarding the received command to the application (see Kekic col. 5, lines 9-15; col. 15, lines 32-36: distributed environment; col. 16, lines 7-11: predefined command (register (i.e. command stored in a list or record))), and Chen discloses wherein a common command interface having a central command daemon (see Chen col. 7, lines 55-59: command line interface).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rangachar to enable the capability to process commands via a local user interface as taught by Kekic, and to enable the capability for a common command interface as taught by Chen. One of ordinary skill in the art would be motivated to employ Kekic in order to efficiently manage a changing, growing robust, and secure heterogeneous network (see Kekic col. 5, lines 2-7), and to employ Chen in order to enable a flexible and robust user interface for network management control (see Chen col. 1, lines 21-24).

Regarding Claim 20, Rangachar discloses the telecommunications network device of claim 18, wherein the common command interface comprises a distributed system and a central system including:

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- a) a central command daemon; (see Rangachar col. 4, lines 18-22; col. 7, lines 6-10: network manager (central command daemon)) and
- b) a plurality of distributed command proxies. (see Rangachar col. 4, lines 7-11; col. 5, lines 23-28: processes (command proxies))

Regarding Claims 27, Rangachar discloses the method of claim 18, wherein the user interface comprises: a network/element management system interface. (see Rangachar col. 4, lines 7-11: network management system with management console or station)

7. **Claims 21 - 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Rangachar-Kekic-Chen** as applied to claim 18 above, and further in view of **Barrett et al.** (US 6,782,420).

Regarding Claim 21, Rangachar does not specifically disclose an API interface for application development. However, Barrett discloses the telecommunications network device of claim 18, wherein the application comprises: a command application programming interface (API) for registering the command with the common command interface and for responding to the command forwarded by the common command interface. (see Barrett col. 2, lines 41-46; col. 3, lines 16-20; col. 4, line 64 - col. 5, line 2: API interface for application development)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rangachar to enable usage of an Application

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Programming Interface (API) in application development as taught by Barrett. One of ordinary skill in the art would be motivated to employ Barrett in order to enable efficient communications between a management server and distributed client. (see Barrett col. 3, lines 16-20)

Regarding Claim 22, Rangachar discloses the telecommunications network device of claim 21, wherein the command API comprises:

- b) a command handler for responding to the command forwarded by the common command interface. (see col. 4, lines 18-25: network manager (command handler) processing commands)

Rangachar does not disclose the registration of a command. However, Barrett discloses :

- a) a registration routine for registering the command with the common command interface; (see Kekic col. 5, lines 9-15; col. 15, lines 32-36: distributed environment; col. 16, lines 7-11: predefined command (register (i.e. command stored in a list or record))

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rangachar to enable the capability to process commands via a local user interface as taught by Kekic. One of ordinary skill in the art would be motivated to employ Kekic in order to efficiently manage a changing, growing robust, and secure heterogeneous network. (see Kekic col. 5, lines 2-7)

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Regarding Claim 23, Rangachar does not specifically disclose an API interface for application development. However, Barrett discloses the telecommunications network device of claim 22, wherein the application further comprises: a call back routine, wherein the command handler calls the call back routine when the command handler receives the command forwarded by the common command interface. (see Barrett col. 2, lines 41-46; col. 3, lines 16-20; col. 4, line 64 - col. 5, line 2: API interface for application development)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rangachar to enable usage of an Application Programming Interface (API) in application development as taught by Barrett. One of ordinary skill in the art would be motivated to employ Barrett in order to enable efficient communications between a management server and distributed client. (see Barrett col. 3, lines 16-20)

Regarding Claim 24, Rangachar does not disclose a display interface for responses to command. However, Barrett discloses the method of claim 21, wherein completing execution of the command further comprises: calling a display routine linked into the application to send any display data directly to the user interface. (see Barrett col. 2, lines 38-41; col. 5, lines 56-60: display commands and responses at command console)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rangachar to enable a user interface for command processing as taught by Barrett. One of ordinary skill in the art would be motivated to

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employ Barrett in order to enable efficient communications between a management server and distributed client. (see Barrett col. 3, lines 16-20)

Regarding Claim 25, Rangachar does not specifically disclose a web interface for the network management system. However, Barrett discloses the method of claim 18, wherein the user interface comprises: a web interface. (see col. 3, lines 49-52; col. 4, lines 16-22: web type command interface for network management system)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rangachar to enable a web interface as taught by Barrett. One of ordinary skill in the art would be motivated to employ Barrett in order to enable efficient communications between a management server and distributed client. (see Barrett col. 3, lines 16-20)

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kyung H. Shin whose telephone number is (571) 272-3920. The examiner can normally be reached on 9 am - 7 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

K H S

Kyung H Shin
Patent Examiner
Art Unit 2143

KHS
November 27, 2005



JEFFREY PWU
PRIMARY EXAMINER